

A silhouette of a person in tactical gear, including a helmet and a rifle, is shown climbing a vertical wooden post. The person is positioned on the left side of the frame, with their body angled towards the right. The background is a dramatic sunset sky with scattered clouds, illuminated in shades of orange and yellow. The overall scene conveys a sense of strength and resilience.

ARCLIN

Kevlar®

**Braver & Stronger
Together with Kevlar®**

Helmets and Hard Insert Plates made with Kevlar® and Tensylon®

Protecting those who protect us

For military war fighters and law enforcement, dodging bullets, shrapnel, and explosions is a regular part of their day. Helmets made with Arclin™ Kevlar® and Arclin™ Tensylon® have helped save thousands of lives from a range of threats. Helmets and insert plates made with Arclin materials address the demanding requirements of a demanding job. They help offer protection against a wide range of threats, including submachine-gun bullets and high velocity fragments. State-of-the-art military helmets made with Kevlar® and Tensylon®.

Rigorous impact testing shows helmets made with Kevlar® fiber have superior structural integrity to help enhance survivability in ballistic and non-ballistic impacts. Since helmets made with Kevlar® or Tensylon® for hard armor technology are lightweight, they can help improve mobility and reduce fatigue to give protectors the much-needed energy to complete their mission.

With Kevlar® for hard armor, military and law enforcement personnel can have a lighter-weight helmet in a 100% Kevlar® solution. Kevlar® for hard armor can be processed on existing helmet manufacturing machinery to allow for an easy transition.



ARCLIN

Tensylon®

Tensylon® is a world-class armor solution that offers an optimal balance of performance, weight and cost for multiple end-use applications. Very low backface deformation to help minimize the injury impact to the wearer. Ideal for use in lightweight helmets.

Tensylon® for Hard Armor helps provide

- Ballistic Protection - weight saving, back face deflection, fragmentation, blast.
- Mechanical Strength - flexural strength, ear-to-ear compression, bolt bearing strength.
- Service Life - high/low temperatures, salt water, long exposure performance.
- Easy Processing - manufacturing technology options, broad processing window, co-processable/hybridization.



Form	DTX	Structure Description	Typical to Nominal in Conditioned Weight (g/m ²)	Merge/Style
K129 Plain Weave Fabric (High Tenacity)	3140 DTX	Heat set Para-aramid	410	258H
K29 Plain Weave Fabric (Standard Tenacity)	3330 DTX	Greige, Scoured Para-aramid	460	745GR/7451S
K129 PrePreg Fabric (High Tenacity)	3140 DTX	Heat Set PrePreg, Double Sided	460/510	HA K510D
Bidirectional Laminate	N/A	2 Ply - UHMWPE for Complex Shapes	110	30A
Bidirectional Laminate	N/A	4 Ply - UHMWPE for Noncomplex Panels	215	40A
Bidirectional Laminate	N/A	4 Ply - UHMWPE for Helmets	205	HA120

Selection Criteria	Kevlar® Plain Weave (Standard Tenacity)	Kevlar® Plain Weave (High Tenacity)	Kevlar® PrePreg Fabrics	Tensylon® Bi Directional Laminates
Ballistic Protection	✓✓✓	✓✓✓	✓✓✓	✓✓✓✓
Trauma Reduction	✓✓	✓✓✓	✓✓✓✓	✓✓✓✓
Fragment Protection	✓✓	✓✓✓	✓✓✓	✓✓✓✓
Overall Performance to Weight	✓✓	✓✓	✓✓✓	✓✓✓✓

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